Prime Electric Motors
Cumberland County
Gorham, Maine
A-1089-71-A-N

Departmental
Findings of Fact and Order
Air Emission License
After-the-Fact

FINDINGS OF FACT

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Prime Electric Motors located at 72 Sanford Drive, Gorham, Maine has requested an after-the-fact air emissions license for an existing source from the Maine Department of Environmental Protection permitting the operation of emission sources associated with their electric equipment refurbishing facility.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Model	Pollution Control Products
Incinerator Type	V
No. Of Chambers	2
Type of Waste	6
Max. Combustion Rate	400 lb/hr
Aux. Fuel Input: **Primary Chamber (MMBtu/hr)** **Secondary Chamber (MMBtu/hr)**	 0.29 0.80
Aux. Fuel	Natural Gas
Control Device	Afterburner

Generator

Equipment	Maximum Design Capacity KW	Firing Rate (gal/hr)	Fuel Type, % sulfur	Manu. Date	Install. Date
Emergency Generator #1	350	25	0.0015	1990	2011

The following fuel burning equipment is listed for inventory purposes only, as they are each rated at less than 1.0 MMBtu/hr heat input capacity.

Emission Unit	Max. Firing Rate MMBtu/hr	Fuel
Steam Cleaner	0.21	Diesel
#1 HVAC	0.08	Natural Gas
#2 HVAC	0.08	Natural Gas
#3 HVAC	0.205	Natural Gas
#4 HVAC	0.25	Natural Gas
#5 HVAC	0.25	Natural Gas
Parts Washer	0.25	Natural Gas

Process Equipment

Equipment	Pollutants Generated	Pollution Control Equipment
Paint Spray Booth	VOC & PM	Dry filter
Sand Blaster	PM	Dry filter
Bead Blaster	PM	Dry filter
Dip Tank	VOC	None
Small Bake-Out Oven	Negligible	None
Large Bake-Out Oven	Negligible	None
Wash Tank	Negligible	None
Parts Washer	Negligible	None

C. Application Classification

Prime Electric Motors (Prime) is classified as an existing source that is applying for its first air emission license, after the fact. A source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as given in 06-096 Code of Maine Rules (CMR) 100 (as amended). The emissions for the new source are determined by the maximum future license allowed emissions, as follows:

Pollutant	Max. Future License (TPY)	Sig. Level
PM	0.26	100
PM_{10}	0.26	100
SO_2	0.02	100
NO_x	1.21	100
CO	0.55	100
VOC	2.69	50
CO_2e	<100,000	100,000

The Department has determined the facility to be below the major source thresholds and is considered to be a minor source. Prime's application has been processed through *Major and Minor source Air Emission License Regulations*, 06-096 CMR 115 (as amended). Generator #1 shall limited to 100 hours of non-emergency service including testing and maintenance. This source is determined to be a natural minor new source and an area source of hazardous air pollutants (HAP) and has been processed as such.

D. Regulatory Review

Provided in this section is a summary of State and Federal air regulations that apply to the existing emission sources at Prime. The facility currently utilizes and has selected specific equipment that will achieve compliance with the following State and Federal air regulations.

06-096 CMR 101 Visible Emission Regulation

This rule establishes opacity limitations for emissions from several categories of air contaminant sources. Stationary Internal Combustion Engines are subject to Section (2)(B)(1)(d), which limits visible emissions to an opacity of 20 percent on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

06-096 CMR 104 Incinerator Particulate Emission Standard

This regulation establishes a limitation on the amount of particulate matter allowed to be emitted from each of several categories and sizes of incinerators and a limitation on the opacity of emissions from all incinerators. Any Class III, IV, V, VI, and VII incinerator having a designed charging rate of 50 tons per day or less, must meet a particulate matter emission limit of 0.2 grains per standard cubic foot of dry flue gas for a two hour sampling period corrected to 12 percent carbon dioxide without the contribution of carbon dioxide from the auxiliary fuel. Although Prime is subject to this requirement, the BACT analysis has required a more stringent limit.

06-096 CMR 115 Major and Minor Source Air Emission License Regulations

This rule specifies who must obtain an air emission license, describes the information an applicant must submit for a license, and describes the standards and criteria that must be complied with during and following the air licensing process. For minor sources such as Prime, 06-096 CMR 115 (as amended) serves as an operating licensing program and a pre-construction license review program.

60-096 CMR 129 Surface Coating Facilities

This regulation established consistent requirements for testing, evaluating and limiting the emission of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) from selected surface coating operations, including the surface coating of miscellaneous metal parts and products.

E. Federal Air Regulations

National Emission Standards of Hazard Air Pollutants (NESHAP)

40 CFR Part 63 Subpart ZZZZ - *National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines* is applicable to sources that commenced construction or reconstruction of the stationary Reciprocating Internal Combustion Engine (RICE) before June 12, 2006. Emergency Generator #1 was manufactured in 1990 and purchased as an existing piece of equipment. Therefore, it is considered existing and is subject to Subpart ZZZZ. A change of ownership of existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE. [40 CFR Part 63.6590 (a)(1)(iv)]

Emergency Generator #1 is considered an existing, stationary reciprocating internal combustion engine at an area source of HAP and is not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional*

Emergency Stationary RICE in the NESHAP for Stationary RICE) specifically does not exempt this unit from the federal requirements. Prime is subject to this federal regulation, the requirements of which are described in (Best Practical Treatment Analysis) Section II F.

40 CFR Part 63 Subpart HHHHHH – *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources* is applicable to Paint Stripping operations that involve the use of methylene chloride in the paint removal process, auto body refinishing operations, and spray applications of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd) to any part or product made of metal or plastic that are not motor vehicles or mobile equipment. Although Prime removes paint from motors and other electric equipment, it does not use methylene chloride to do so. Review of Prime's Safety Data Sheets indicates that none of the coatings or paints contain the metals listed above. Therefore, Prime is not subject to 40 CFR Part 63 Subpart HHHHHH.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Technology (BACT) as defined in 06-096 CMR 100. BACT is a top down approach to selecting air emission controls considering economic, environmental and energy impacts.

Process Overview

Prime rebuilds and refurbishes electric motors. Motors arriving at the facility are first weighed, then they are steam cleaned and in some cases dried in one of the bake out ovens. If a motor needs to be rewound, which occurs in approximately 10% of the motors, the copper wire coils are removed from the electric motors. The old resin and other contaminants are burned off of the copper coils in the incinerator. The coils are then rewound with new copper, then dipped in a varnish resin dip and placed to cure in a bake out oven. The majority of the VOC emissions result from xylene used in the resin dip. A small amount is used in painting as a paint thinner.

Parts that are not sent to the incinerator are further cleaned as necessary in the parts washer. Sand and Bead blasting are used to clean for excessively rusted assemblies. After the motor is reassembled, it is painted and air dried.

B. Incinerator

Prime operates a Pollution Control Products incinerator, model PTR 260995. The unit was manufactured in 1995 and installed in June 2013. The Incinerator is used to remove the outer wire coatings from the coil windings by heating it to approximately 650-700°F. To prevent damage to the equipment, the incinerator is equipped with a water suppression system which comes on if the primary chamber goes five degrees over set point. Gases from the primary chamber flow to the afterburner where the VOCs are combusted. The afterburner is set to 1200°F.

To meet the requirements of BACT for control of PM and VOC emissions from the Incinerator, Prime shall operate the incinerator as follows:

1. To ensure an efficient burn and to prevent odors and minimize visible emissions, the afterburner chamber shall be preheated, as specified by the manufacturer, until the temperature measures a minimum of 1200°F prior to commencing the burn cycle.

2. The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1200°F for the duration of the burn cycle.

3. Prime shall maintain a log detailing and quantifying the hours of operation on a daily basis for the Incinerator. The log shall record the motor identification, preheat temperature, preheating time, charging time, afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location.

4. A maximum particulate emission rate of 0.10 gr/dscf corrected to 12% CO_2 shall be met. Emissions information is based on the burning of natural gas fuel as an auxiliary fuel, and the use of AP-42 emission factors: Tables 1.4-1 and 1.4-2 for natural gas combustion (dated 7/98):

PM/PM_{10}	–	0.10 gr/dscf corrected to 12% CO_2 based on BACT; and 0.05 lb/MMBtu
SO_2	–	0.6 lb/MMscf, AP-42 Table 1.4-2
NO_x	–	100 lb/MMscf, AP-42 Table 1.4-1
CO	–	84 lb/MMscf, AP-42 Table 1.4-1
VOC	–	5.5 lb/MMscf, AP-42 Table 1.4-2
Opacity	–	06-096 CMR 101

BACT emission limits for the Incinerator are the following:

	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Incinerator	0.05	0.05	0.001	0.11	0.09	0.01

5. Visible emissions from the Incinerator shall not exceed 10% opacity based on a six (6) minute block average basis.

6. The Incinerator and afterburner shall use only natural gas as a fuel.

C. Process Equipment

Varnish Dip Tank
Prime utilizes a Varnish Dip Tank as part of their motor refurbishing process. The dip tank is used to seal motor windings to prevent moisture and contaminant penetration. Prime uses a Baking Varnish and xylene based thinner for this operation. Prime shall maintain monthly records indicating the amount of varnish and thinner added and used in the Varnish Dip Tank.

Electric Bake-out Ovens
Prime operates two bake-out ovens used for drying and curing motor parts. These units are operated on a limited basis with small quantities of VOC emissions from varnish and/or paint applied to parts. There is no afterburner on the equipment and emissions are considered to be negligible.

Steam Cleaner
The Steam Cleaner is used to clean motors as needed. This unit is enclosed and uses diesel fuel to generate the required steam. Emissions from this unit are vented through its own stack and are negligible. This unit is included in the license for inventory purposes only.

Paint Spray Booth
Prime paints motor housings upon completion of the motor assembly. The Paint Spray Booth has an exhaust fan that blows through a dry paper filter for particulate control and then vents outside. VOC emissions are calculated using the Safety Data Sheet's VOC content information from paints and thinners. Xylene is the principal VOC component of the paints, varnish dip, and thinners used by Prime.

BACT for Paint Spray Booth shall be as follows:

1. When spray application of paint is occurring, operate the exhaust fan.
2. Properly maintain the spray booth, including conducting frequent inspections of the blower equipment and the spray booth filter pads.
3. Immediately clean up any spilled or excess coating material
4. Visible emissions from the Paint Spray Booth stack shall not exceed 10% opacity on a 6 minute block average.
5. A written log documenting all maintenance performed on the Paint Spray Booth and filters shall be kept.

VOC Emissions

The painting and coating in the dipping process conducted by Prime is subject to 06-096 CMR 129, Surface Coating Facilities (last amended April 16, 2011) as surface coating of miscellaneous metal parts and products [06-096 CMR 129 (1)(A)(6)]. According to Section (1)(C)(4), a source whose total actual emissions of VOC from all coating units, lines or operations are fifteen (15) pounds (lb) VOC per day or greater shall comply with the emission limitations in Section 3 of Chapter 129 unless:

(a) The maximum theoretical emissions from all surface coating operations are limited by permit or order of the Department to 1,666 lb or less in any calendar month;
(b) The facility is and has at all times been in compliance with this maximum theoretical emissions limit since issuance of the permit or order of the Department; and
(c) The total actual emissions from the facility have not exceeded 1,666 lb in any calendar month since January 1990.

Prime does not emit more than 15 lb/day of VOC and this has been added as a restriction to their air emission license. Therefore, the coating operations at Prime are not subject to further limitations or restrictions under 06-096 CMR 129. Prime shall be limited to an emission limit of less than 15 lb/day or 2.6 tons VOC/year from non-combustion process operations. Records of paint, coating, and thinners usage shall be kept for compliance purposes.

Prime shall maintain monthly records on the premises to document the name and identification of each paint, coating and thinner and mass of VOC per volume of each paint, coating, and thinner excluding water and exempt compounds applied, used each month on each paint, coating, dipping unit, line or operation, and the total emissions at Prime each month.

Prime shall not exceed a total annual VOC emission limit of 2.6 tons per year from non-combustion process sources on a calendar year basis

Bead and Sand Blasting

1. Prime uses a sand blasting and a bead blasting cabinet to clean some of their parts and materials. The residue from these units is controlled by an exhaust fan that blows through a dry paper filter for particulate control and then vents outside. The blasting cabinet exhaust system shall be operated when sand or bead blasting is occurring.
2. A written log of all maintenance done on the bead blasting units and dust collectors shall be kept.
3. Visible emissions from each sand or bead blasting unit stack shall not exceed 10% opacity on a six minute average.

D. Parts Washer

The parts washer was manufactured in 1995 and installed in 2011 and has a design capacity of 50 gallons. The parts washer is a natural gas fired unit (0.25 MMBtu/hr) heating a biodegradable citrus based solvent with a vapor pressure less than 1 mm-Hg @20°C, therefore, is not subject to *Solvent Cleaners*, 06-096 CMR 130 (as amended).

E. General Process Emissions

Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

F. Emergency Generator #1

Prime operates one emergency generator (Emergency Generator #1). The emergency generator is rated at 3.4 MMBtu/hr and fires diesel fuel. The generator was manufactured in 1990 and installed at the facility in 2011. Prime does not intend to participate in Emergency Demand Response and its generator is not connected to the grid.

1. BACT Findings

The BACT emission limits for Emergency Generator #1 are based on the following:

PM/PM_{10}	- 0.12 lb/MMBtu from 06-096 CMR 103
SO_2	- combustion of diesel fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur)
NO_x	- 4.41 lb/MMBtu from AP-42 dated 10/96
CO	- 0.95 lb/MMBtu from AP-42 dated 10/96
VOC	- 0.35 lb/MMBtu from AP-42 dated 10/96
Opacity	- 06-096 CMR 101

The BACT emission limits for the generator are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1 (3.4 MMBtu/hr), Diesel	0.41	0.41	0.01	15.04	3.24	1.19

Visible emissions from Emergency Generator #1 shall not exceed 20% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

Emergency Generator #1 shall be limited to 100 hours of non-emergency operation a year, based on a calendar year. Prime shall keep records of the hours of operation for the unit.

2. 40 CFR Part 63, Subpart ZZZZ

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is applicable to Emergency Generator #1. The unit is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source and is not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt this unit from the federal requirements.

a. Emergency Definition:

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the following criteria:

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) Paragraph (1) above notwithstanding, the emergency stationary RICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:

(i) Maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii)Periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Paragraphs (1) and (2) above notwithstanding, emergency stationary RICE may be operated for up to 50 hours per calendar year in non-emergency situations. These 50 hours are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing, emergency demand response, and periods of voltage deviation or low frequency, as provided in paragraph (2) above.

The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity, except provided in the following paragraphs:

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution center.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(a) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(b) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(c) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(d) The power is provided only to the facility itself or to support the local transmission and distribution system.

(e) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

Emergency Generator #1 shall be limited to the usage outlined in §63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 CFR Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in §63.6640(f) may cause this engine to not be considered an emergency engine and therefore subject to all the requirements for non-emergency engines.

b. 40 CFR Part 63, Subpart ZZZZ Requirements:

(1) Operation and Maintenance Requirements

	Operating Limitations (40 CFR §63.6603(a) and Table 2(d))
Compression ignition diesel unit: Emergency Generator #1	- Change oil and filter every 500 hours of operation or annually, whichever comes first; - Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and - Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or Prime shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR §63.6625(e)]

(2) Optional Oil Analysis Program
Prime has the option of utilizing an oil analysis program which complies with the requirements of §63.6625(i) in order to extend the specified oil change requirement. If this option is used, Prime must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR§63.6625(i)]

(3) Non-Resettable Hour Meter Requirement
A non-resettable hour meter shall be installed and operated on the generator. [40 CFR §63.6625(f)]

(4) Startup Idle and Startup Time Minimization Requirements
During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]

(5) Annual Time Limit for Maintenance and Testing
The generator shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §63.6640(f)(4)(ii) are met). [40 CFR §63.6640(f)]

(6) Recordkeeping
Prime shall keep records that include maintenance conducted on the generator and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation

as emergency and how many hours spent for non-emergency. If the generator is operated during a period of demand response or deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), Prime must keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f)]

G. Annual Emissions

1. Prime shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on incinerator natural gas usage for 8760 hours/year and engine operation of 100 hours per year of non-emergency service. VOC emissions were limited to 2.6 tons/year (<15 lbs/day) from process sources using coating, paints, varnish dips and thinners:

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Incinerator	0.24	0.24	0.01	0.75	0.16	0.06
Emergency engine	0.02	0.02	0.01	0.46	0.39	0.03
Process emissions	--	--	--	--	--	2.6
Total TPY	**0.26**	**0.26**	**0.02**	**1.21**	**0.55**	**2.69**

2. Greenhouse Gases
Greenhouse gases are considered regulated pollutants as of January 2, 2011 through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans,* 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. "Greenhouse gases" as defined in 06-096 CMR 100 (as amended) means the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Greenhouse gases (GHG) for purposes of licensing are calculated and reported as carbon dioxide equivalents (CO_2 e).

Based on the Prime's fuel use limits, the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, Prime is below the major source

threshold of 100,000 tons of CO_2 e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

Pollutant	Tons/Year
PM_{10}	25
SO_2	50
NO_x	50
CO	250

The total facility licensed emissions are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1089-71-A-N subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
   1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
   2. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

C. submit a written report to the Department within thirty (30) days from date of test completion.

[06-096 CMR 115]

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) **Incinerator**

A. The afterburner shall be operated at all times during incinerator operation, to ensure an efficient burn and minimize visible emissions. The after burner chamber shall be preheated as specified by the manufacturer, until the temperature measures a minimum of 1200^{O}F prior to commencing the burn cycle. [06-096 CMR 115, BACT]

B. The temperature of the secondary chamber or refractory lined stack shall be maintained at or above 1200°F for the duration of the burn cycle. [06-096 CMR 115, BACT]

C. Prime shall maintain a log detailing and quantifying the hours of operation on a daily basis for the Incinerator. The log shall record the motor identification, preheat temperature, preheating time, charging time, afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location. [06-096 CMR 115, BACT]

D. Fuel input to the primary and secondary chamber shall be natural gas. Natural gas usage shall be recorded and kept for compliance purposes. [06-096 CMR 115, BACT]

E. Visible emissions from the Incinerator shall not exceed an opacity limit of 10% based on a six (6) minute block average basis. [06-096 CMR 115, BACT]

F. Prime shall not exceed a particulate matter emission limit of 0.10 gr/dscf corrected to 12% CO_2 from the auxiliary fuel. Therefore, based on the maximum design combustion rate and continuous operation of the incinerator, emissions shall be limited to the following [06-096 CMR 115, BACT]:

Pollutant	gr/dscf	lb/hr
PM	0.1	0.05
PM_{10}	n/a	0.05
SO_2	n/a	0.001
NO_x	n/a	0.11
CO	n/a	0.09
VOC	n/a	0.01

(17) **Paint Spray Booth**

A. The Paint Spray Booth exhaust system shall be operated when the spray application of paint is occurring. The Paint Spray Booth shall be vented through fabric or paper filters.

B. Visible emissions from the paint booth stack shall not exceed 10% opacity on a six minute block average.

C. Prime shall immediately clean up any spilled or excess coating material

D. A written log documenting all maintenance performed on the Paint Spray Booth, exhaust system, and filters shall be kept.

[06-096 CMR 115, BACT]

(18) **VOC Emissions**

A. Prime shall be limited to a VOC emission limit of less than 15 lb/day or 2.6 tons VOC/year from non-combustion process operations.
B. Prime shall maintain monthly records on the premises to document the name and identification of each paint, coating, varnish, and thinner and mass of VOC per volume of each paint, coating, varnish, and thinner excluding water and exempt compounds applied, used each month on each unit, line or operation, and the total emission at Prime each month. Records of paint, thinner, varnish dip, and other coatings VOC content and usage shall be kept for compliance purposes.

[06-096 CMR 129 and 06-096 CMR 115, BACT]

(19) **Sand and Bead Blasting Units**

A. The Sand and Bead Blasting Unit's exhaust system shall be operated when Sand or Bead Blasting is occurring. Dust from blasting shall be contained in a booth or cabinet and shall be exhausted through fabric or paper filters.
B. A written log of all maintenance done on the Sand and Bead Blasting Units and fabric or paper filters shall be kept.
C. Visible emissions from each Sand and/or Bead Blasting Unit stack shall not exceed 10% opacity on a six minute average.

[06-096CMR 101 and 115, BACT]

(20) **Emergency Generator #1**

A. Emergency Generator #1 is limited to 100 hours per year of non-emergency operation, based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [06-096 CMR 115, BACT]

B. The diesel fuel oil sulfur content for Emergency Generator #1 shall be limited to 0.0015% sulfur. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BACT]

C. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Emergency Generator #1	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

D. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Emergency Generator #1 (3.4 MMBtu/hr), diesel	0.41	0.41	0.01	15.04	3.24	1.19

E. Visible Emissions from Emergency Generator #1 shall not exceed 20% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period. [06-096 CMR 101]

F. Emergency Generator #1 shall meet the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, including, but not limited to, the following:

1. Prime shall meet the following operational limitations for Emergency Generator #1:
   a. Change the oil and filter annually,
   b. Inspect the air cleaner annually and replace as necessary, and
   c. Inspect the hoses and belts annually and replace as necessary.
   d. A log shall be maintained documenting compliance with the operational limitations.

   [40 CFR §63.6603(a) and Table 2(d); and 06-096 CMR 115, BACT]

2. Oil Analysis Program Option
   Prime has the option of utilizing an oil analysis program which complies with the requirements of §63.6625(i) in order to extend the specified oil change requirement. If this option is used, Prime must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.
   [40 CFR§63.6625(i) and 06-096 CMR 115, BACT]

3. Non-Resettable Hour Meter
   A non-resettable hour meter shall be installed and operated the generator.
   [40 CFR §63.6625(f) and 06-096 CMR 115, BACT]

4. Maintenance, Testing, and Non-Emergency Operating Situations
   a. The generator shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to

generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §63.6640(f)(4)(ii) are met). These limits are based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours.
[40 CFR §63.6640(f) and 06-096 CMR 115]

b. Prime shall keep records that include maintenance conducted on the generator and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generator is operated during a period of demand response or deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), the Prime must keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f) and 06-096 CMR 115, BACT]

5. Operation and Maintenance
The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or Prime shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
[40 CFR §63.6625(e) and 06-096 CMR 115, BACT]

6. Startup Idle and Startup Time Minimization
During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d and 06-096 CMR 115, BACT]

(21) **General Process Sources**

Visible emissions from any general process source, including the bake-out ovens, shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.
[06-096 CMR 101]

(22) Prime shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 1 DAY OF April , 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PATRICIA W. AHO, COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 MRSA §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 17, 2013
Date of application acceptance: September 23, 2013

Date filed with the Board of Environmental Protection:

This Order prepared by Lisa P. Higgins, Bureau of Air Quality.

Filed
APR 02 2014
State of Maine
Board of Environmental Protection